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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,470	12/28/2001	Everett Arthur Corl JR.	RAL920000129SU1	5433

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IBM CORPORATION
PO BOX 12195
DEPT YXSA, BLDG 002
RESEARCH TRIANGLE PARK, NC 27709

EXAMINER	
BOUTAH, ALINA A	

ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/034,470	CORL ET AL.	
	Examiner	Art Unit	
	Alina N. Boutah	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 December 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-50* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 December 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/28/01*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

The reference number 248 in line 1 of page 2 should be changed to 148. Appropriate action is required.

Claim Objections

Claims 25-27 are objected to because they depend on independent claim 1. It is assumed that this is a type and that they actually depend on independent claim 17.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art (hereinafter referred to as AAPR) in view of USPN 6,529,508 issued to Li et al. (hereinafter Li).

Regarding claim 1, AAPR teaches a method for supporting multifield classification of a packet fragmented into a plurality of fragments in a wire-speed forwarding platform, the method comprising:

(a) receiving a fragment of the fragmented packet deriving a key from one or more fields of the received fragment (specification: figure 3; page 5, lines 6-29); and

(b) performing multifield classification of the received fragment by matching the key to a rule out of a plurality of rules, the rule comprising a plurality of fields including at least one field for specifying whether the received fragment's fragmentation characteristics are to be applied when performing the multifield classification (specification; figure 3, page 5, lines 6-20, page 6, line 23 to page 8, line 20).

However, AAPR does not explicitly teach receiving the fragment packet at the forwarding platform. Li teaches receiving fragmented packets at a forwarding platform (figure 5). At the time the invention was made, one of ordinary skill in the art would have been motivated to receive and forward fragment packet at the forwarding platform in order to provide a plurality of different levels of service over computer networks (col. 1, lines 16-25).

Regarding claim 2, AAPR teaches the method for supporting multifield classification according to claim 1, wherein the rule further comprises a field for specifying an action to be applied to the received fragment, the method further comprising a step of: applying the action to the received fragment when the key matches the rule for the received fragment (specification, page 5, lines 18-29).

Regarding claim 3, AAPR teaches the method for supporting multifield classification according to claim 1, further comprising the steps of: receiving a packet at the forwarding platform; and testing the received packet for determining whether the packet represents a fragment; and performing the multifield classification of the received packet by matching a key derived from one or more fields of the received packet to a rule, the rule comprising a plurality of fields including a t least one field for specifying whether the received packet's fragmentation characteristics are to be applied when performing the multifield classification (specification; figure 3, page 5, lines 6-20, page 6, line 23 to page 8, line 20).

Regarding claim 4, AAPR teaches the method for supporting multifield classification according to claim 1, further comprising the steps of: determining whether there are any transfer control protocol (TCP) rules; and performing the multifield classification if no TCP rules are indicated (figure 1).

Regarding claim 5, AAPR teaches the method for supporting multifield classification according to claim 1, further comprising a step of preprocessing the received fragment by querying a data structure in the forwarding platform, the data structure comprising one or more flags for determining whether the received fragment is to be classified in the forwarding platform classification (specification; figure 3, page 5, lines 6-20, page 6, line 23 to page 8, line 20).

Regarding claim 6, Li teaches the method for supporting multifield classification according to claim 5, wherein the preprocessing determines to forward the received fragment to a slow-speed forwarding platform (col. 1, lines 59-66).

Regarding claim 7, AAPR teaches the method for supporting multifield classification according to claim 5, wherein the preprocessing determines to discard the received fragment (specification: page 5, lines21-22).

Regarding claim 8, Li teaches the method for supporting multifield classification according to claim 5, wherein the one or more flags are exclusive of one another (col. 3, line 58 to col. 4, line 15).

Regarding claim 9, AAPR teaches the method for supporting multifield classification according to claim 1, wherein the one or more fields that comprise the key derived from the received fragment include fields from headers representing one or more transmission protocols (specification: page 5, lines 6-29).

Regarding claim 10, AAPR teaches the method for supporting multifield classification according to claim 9, wherein the one or more transmission protocols include: Internet Protocol

(IP); User Datagram Protocol (UDP); Internet Control Message Protocol (ICMP); and Internet Group Management Protocol (IGMP) (figure 1).

Regarding claim 11, AAPR teaches the method for supporting multifield classification according to claim 9, wherein the one or more fields include: source address (SA), destination address (DA), protocol, fragmented flag (FRAG) and not subsequent flag (NO SUBS) from a header of an IP transmission protocol; and a source port (SP) and a destination port (DP) from a header of a TCP transmission protocol (figure 1).

Regarding claim 12, AAPR teaches the method for supporting multifield classification according to claim 1, wherein a field in each rule comprises one or more values to be matched against the one or more fields of the derived key for the received fragment (specification: page 5, lines 6-29).

Regarding claim 13, Li teaches the method for supporting multifield classification according to claim 12, wherein the one or more values represent an upper and a lower limit for a field in each rule (col. 5, line 48 to col. 6, line 5).

Regarding claim 14, Li teaches the method for supporting multifield classification according to claim 1, wherein the one or more values represent a mask and a value (figure 9A).

Regarding claim 15, Li teaches the method for supporting multifield classification according to claim 1, wherein the plurality of rules are stored in the forwarding platform (figure 5).

Regarding claim 16, AAPR teaches the method for supporting multifield classification according to claim 1, wherein the plurality of rules is stored in a rules database (specification: page 5, lines 6-29).

Claims 17-32 and 33-48 are similar to claims 1-16, therefore are rejected under the same rationale.

Regarding claim 49, AAPR teaches a method for supporting multifield classification of a packet fragmented into a plurality of fragments in a wire-speed forwarding platform, the method comprising:

(a) receiving a fragment of the fragmented packet and deriving a key from one or more fields of the received fragment (specification: figure 3; page 5, lines 6-29);

(b) preprocessing the received fragment by querying a data structure that comprises one or more flags (specification; figure 3, page 5, lines 6-20, page 6, line 23 to page 8, line 20);

(c) redirecting or discarding the received fragment if it is determined that the received fragment is not to be classified (specification; figure 3, page 5, lines 6-20, page 6, line 23 to page 8, line 20); and

(d) performing multifield classification of the received fragment by matching the key to a rule out of a plurality of rules, the rule comprising a plurality of fields including at least one field for specifying whether the received fragment's fragmentation characteristics are to be applied when performing the multifield classification (specification; figure 3, page 5, lines 6-20, page 6, line 23 to page 8, line 20).

However, AAPR does not explicitly teach receiving the fragment packet at the forwarding platform. Li teaches receiving fragmented packets at a forwarding platform (figure 5). At the time the invention was made, one of ordinary skill in the art would have been motivated to receive and forward fragment packet at the forwarding platform in order to provide a plurality of different levels of service over computer networks (col. 1, lines 16-25).

Regarding claim 50, AAPR teaches a method for supporting multifield classification of a packet fragmented into a plurality of fragments in a wire-speed forwarding platform, the method comprising:

(a) receiving a fragment of the fragmented packet and deriving a key from one or more fields of the received fragment (specification; figure 3, page 5, lines 6-20, page 6, line 23 to page 8, line 20);

(b) determining whether there are transfer control protocol (TCP) rules and if it is determined that there are no TCP rules indicated performing multifield classification of the received fragment according to step (d) (specification; figure 3, page 5, lines 6-20, page 6, line 23 to page 8, line 20);

(c) preprocessing the received fragment if there are TCP rules by querying a data structure that comprises one or more flags for determining whether the received fragment is to be classified and redirecting or discarding the received fragment if it is determined that the received fragment is not to be classified (specification; figure 3, page 5, lines 6-20, page 6, line 23 to page 8, line 20); and

(d) performing multifield classification of the received fragment by matching the key to a rule out of a plurality of rules, the rule comprising a plurality of fields including at least one field for specifying whether the received fragment's fragmentation characteristics are to be applied when performing the multifield classification (specification; figure 3, page 5, lines 6-20, page 6, line 23 to page 8, line 20).

However, AAPR does not explicitly teach receiving the fragment packet at the forwarding platform. Li teaches receiving fragmented packets at a forwarding platform (figure 5). At the time the invention was made, one of ordinary skill in the art would have been

motivated to receive and forward fragment packet at the forwarding platform in order to provide a plurality of different levels of service over computer networks (col. 1, lines 16-25).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alina N. Boutah whose telephone number is 571-272-3908. The examiner can normally be reached on Monday-Friday (9:00 am - 5:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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WILLIAM C. VAUGHN, JR.
PRIMARY EXAMINER